The
Spotting Scope

A quarterly newsletter of the Natural Heritage Program Fall 2005
Volume 11 Number 1 Michigan Department of Natural Resources

STUDY SEEKS REPORTS OF BIRDS BREEDING IN MICHIGAN

Ray Adams, Breeding Bird Atlas Coordinator

The recent confirmation of the of the Ivory-billed Woodpecker, spotted in the swampy bottomland hardwood forests of Arkansas, illustrates how much we still have to learn about birds and their distribution. Since 2002, Surveyors working as part of the second Michigan Breeding Bird Atlas (MBBA II) have also made some surprising bird observations. They have documented the first confirmed breeding observations of the Great Gray Owl, Black-necked Stilt, and the Blue Grosbeak in Michigan. More discoveries are anticipated during the final year of fieldwork.

The MBBA II is a comprehensive survey of the state to map the current distribution and abundance of breeding birds. These results will be useful in making decisions on habitat preservation and restoration. Fieldwork for the six-year MBBA II project will conclude in 2007.

The first Atlas project was begun over twenty years ago. Bird populations have markedly changed since then: grassland birds have undergone severe declines; game birds, wetland species, and some forest birds have shown notable decreases in distribution and abundance; at the same time, some species have undergone dramatic increases.

Newly confirmed breeding species have come from throughout the state: Blue Grosbeak in St. Joseph County, Black-necked Stilts in Monroe County, Wilson's Phalarope in Saginaw and Muskegon Counties.

The MBBA II project was initiated through funding from the DNR Natural Heritage Program and is being coordinated by Ray Adams at the Kalamazoo Nature Center (KNC). Additional support comes from the Michigan Audubon Society, U.S. Fish and Wildlife Service, University of Michigan's Rouge River Bird Observatory, U.S. Geological Survey's Patuxent Wildlife Research Center, and many individual donors. Its newest sponsor is the Arcus Foundation's Gay and Lesbian Fund which provided a generous grant in 2005. Additional donors will be needed to fully finance this project.

Volunteer field observers are also needed to help survey our state. You don't need to be an expert to take part in the Atlas; even if you know only the common species where you live, you can help. The more observers, the more accurate the mapping of each species' distribution will be. Fieldwork for this year has been completed, but help is needed next year, and there is still time to report observations from this past summer. Data are needed on game and nongame birds alike.

To find out more about becoming an Atlas volunteer, contact Atlas Headquarters at KNC, **miatlas@naturecenter.org** or by telephone, (269) 381-9738. Information and data forms can be found on the Michigan DNR web site, www.michigan.gov/dnr. Click Wildlife and Habitat then Michigan Breeding Bird Atlas. Donations can be made directly to KNC, 7000 N. Westnedge Avenue, Kalamazoo, MI 49009-6309 or you can donate by purchasing a commemorative Atlas patch through the state of Michigan's online e-store.

Funds from the sale of the commemorative MBBA II patch support the Atlas.

NONGAME WILDLIFE FUND

In This Issue:

Natural Heritage Program information can be found on the web at www.michigan.gov/dnr.

BOGS: A UNIQUE MICHIGAN RESOURCE

Bogs are a type of wetland that occurs throughout Michigan. They are characterized by an accumulation of partially decayed vegetation (peat), acidic conditions, low nutrients, and mats of sphagnum moss. Bogs receive all or most of their water from precipitation rather than runoff, groundwater, or streams. The unique and demanding physical and chemical characteristics of bogs result in the presence of plants and animals that demonstrate special adaptations to low nutrient levels and acidic waters. For example, the northern pitcher plant overcomes the nutrient deficiencies of bogs by capturing insects, in pools of water in its cuplike leaves, and digesting them with the help of bacteria. Other bog plants have developed similar carnivorous strategies to address low nutrient conditions. Other characteristic vegetation includes the carnivorous sundews, shrubs from the Heath family (e.g. leatherleaf, labrador tea), sedges, tamarack, and black spruce.

Most bogs in the United States are found in the northeast and Great Lakes regions, where low temperatures, short growing seasons, high humidity, and plentiful precipitation result in moisture accumulation. Bogs often form in old glacial lakes following the accumulation of peat. They may have considerable amounts of open water surrounded by floating vegetation or may be completely filled with vegetation.

Contrary to Hollywood renditions, bogs are not dark, scary places. Rather, bogs are attractive, interesting, and very important ecologically. Many wildlife species are associated with bogs. Species such as moose, deer, American marten, snowshoe hare, American bittern, yellow rail, Blanding's turtle, brassy minnow, and finescale dace are frequently found in Michigan bogs. Others, such as the southern bog lemming, Connecticut warbler, and Wilson's snipe prefer bogs over other habitats. Still other Michigan wildlife require bogs including the palm warbler, ebony boghaunter dragonfly, frigga fritillary butterfly, and Cantrall's bog-beetle.

Bogs serve important ecological functions. They process nutrients and absorb precipitation, which helps to prevent runoff and downstream flooding. Bogs offer a variety of recreational opportunities including hunting, fishing, hiking, and wildlife or nature observation, along with opportunities to observe some of the most interesting plants in North America. Bogs have also been recognized for their role in regulating the global climate because they store large amounts of carbon in peat deposits.

Bog acreage declined historically in Michigan as they were drained for agriculture and mined for peat to be used as fuel or mulch. Many of the remaining bogs are currently under stress due to a variety of threats, including invasive plants, development, dredging, road construction, wetland drainage, fire suppression, off-road vehicle damage, and continued mining.

Northern Pitcher Plant **Photo by MNFI**

Actions should be taken to prevent further introductions and spread of invasive species, such as the common reed grass or glossy buckthorn. Where invasive species are established, they should be controlled, especially in high quality bogs. Responsible off-road vehicle use should be promoted such as avoiding bogs and restricting trails to upland areas.

Natural moisture conditions should be maintained and, where feasible, historic fire conditions should be restored. Buffers should be maintained around bogs where development does not occur. In addition, corridors should be maintained among and between bogs and upland areas to allow for wildlife dispersal.

Bogs are unique communities that can be easily damaged or destroyed, but require hundreds, if not thousands, of years to form naturally. Little is known on the potential to restore natural bog conditions. Due to this uncertainty and the importance of bogs to wildlife it is imperative that we take steps to protect our remaining bogs. The Department of Natural Resources, along with many conservation partners and private landowners, is attempting to protect and manage important bog areas in Michigan. These efforts will benefit from the assistance and cooperation of the public.

There are opportunities for bog recreation across Michigan, including places like the Waterloo State Recreation Area in Washtenaw County, Yankee Springs Recreation Area in Barry County, Rifle River Recreation Area in Ogemaw County, and the Seney National Wildlife Refuge in Schoolcraft County.

Thousands Gather for 2005 Bat Festivals

Two bat festival events were held this summer in Michigan. On July 29–30 the Michigan bat festival occurred at Cranbrook Institute of Science in Bloomfield Hills. The fourth annual Great Lakes Bat Festival took place August 12–13, in the Upper Peninsula's Iron Mountain. More than 3,000 people attended both events. These festivals represent a unique experience for participants in that they are the only events of their kind in the nation, dedicated specifically to bats. Attendees traveled from nine different States, Canada, and even from Finland to observe and appreciate the world's only flying mammals.

Getting an "up close" look at a bat

Daytime programs included a combination of presentations and demonstrations to teach people about bat biology and Michigan's bats, highlight the important role of bats in the ecosystem, dispel common bat myths, and emphasize the need for bat conservation and critical habitat protection. Several talks featured live animals, including native Michigan wildlife such as a bald eagle, as well as bats from all around the world. The crowd's favorite was a Malaysian gigantic flying fox; with a wingspan greater than five feet, it belongs to the largest bat species in the world.

Little brown bats captured at Millie Mine

Evening programs provided additional opportunities for people to see bats up close. The UP festival featured a special underground tour of the Iron Mountain Iron Mine in Vulcan. Tour participants learned about regional mining history and the importance of mines as critical winter bat habitat; they also saw dozens of bats flying through the tunnels or hanging from mine walls. During another popular evening event, researchers captured bats as they left their roosts in search of food at the Millie Mine Bat Viewing Site in Iron Mountain. The public got an up-close view of Michigan's winged mammals as researchers demonstrated ultrasonic bat-call detectors, answered questions, and demonstrated bat research techniques including the use of glow markers for tracking bat flight paths.

The festival was hosted by the Organization for Bat Conservation, in partnership with the Michigan Department of Natural Resources Wildlife Division, Tourism Association of the Dickinson County Area, Wildlife Unlimited of Dickinson County, and DTE Energy. Funding support for the Great Lakes Bat Festival was provided by the Michigan Nongame Wildlife Fund. Plans for next year's festivals are already underway.

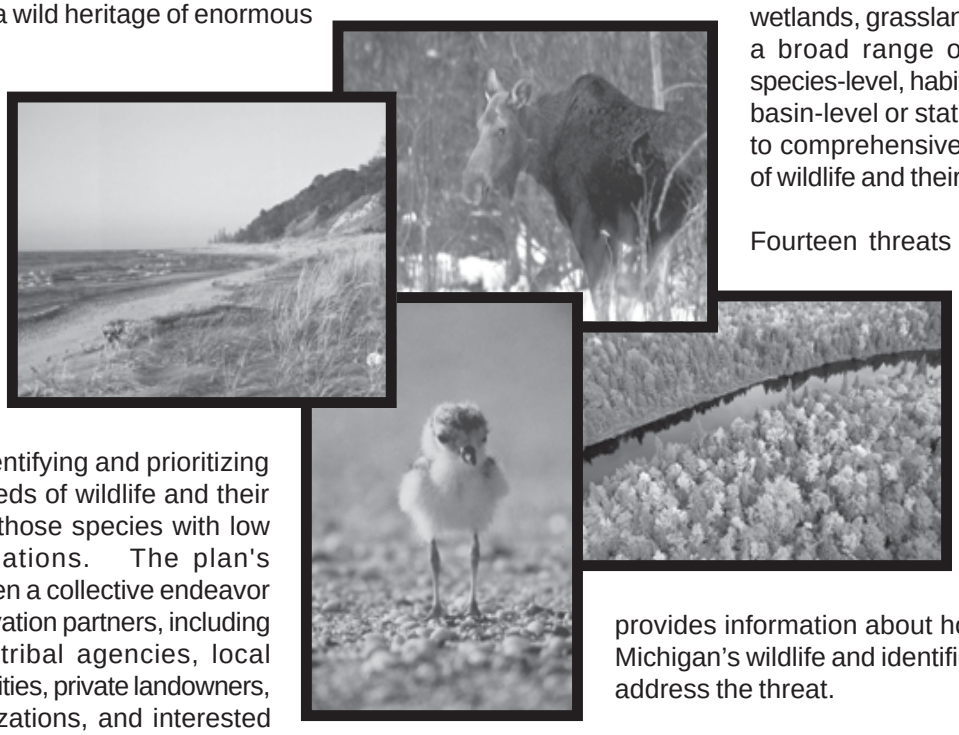
Michigan DNR Photos by David Kenyon

NEW LIVING RESOURCES PATCH

The new 2005 Living Resources patch is now available from the Natural Heritage Unit. The patch depicts a freshwater mussel (foreground) with its "foot" protruded. The foot is used for digging and maneuvering across the stream bottom. An old mussel shell appears in the background. The United States has more mussel species than any other country in the world, with nearly 300 freshwater mussel species. Michigan has 45 species of freshwater mussels. Mussels are among the most imperiled animals in North America. Sixty-nine percent of U.S. freshwater mussel species are already extinct, endangered, or otherwise vulnerable to extinction. In Michigan, many mussels are imperiled by alterations to our rivers such as dredging, channelization, streamflow alteration and dam building, and the introduction of the exotic zebra mussel. The DNR and conservation partners are learning more about our freshwater mussels to conserve remaining populations through protection and restoration. Your purchase will support efforts to survey, manage, and provide education about some of our least understood Michigan residents. The freshwater mussel patch and other Living Resource patches can be purchased online by visiting the e-store at www.michigan.gov/dnr.

MICHIGAN'S WILDLIFE ACTION PLAN

Michigan's amazing diversity of wildlife often is the key element that attracts people to our state to live and to play. The great variety of birds, animals, forests, and waters that we have represents a wild heritage of enormous interest and value.



To guide the future of our state's diverse wildlife resources, the Michigan Department of Natural Resources has been coordinating a two-year strategic planning process aimed at identifying and prioritizing the conservation needs of wildlife and their habitats, especially those species with low or declining populations. The plan's development has been a collective endeavor of Michigan's conservation partners, including state, federal and tribal agencies, local governments, universities, private landowners, conservation organizations, and interested individuals.

The history of wildlife conservation and management in Michigan often has focused on game or threatened and endangered species. The result has been a conservation gap with many species — those in not dire enough circumstances to be endangered but not necessarily abundant either — receiving little attention. Michigan's Wildlife Action Plan (WAP) addresses threats to these species and their habitats in order to conserve the full diversity of Michigan's wildlife.

The plan identifies species of greatest conservation need, including well-known species such as American woodcock, moose, and lake sturgeon; and lesser-known species, such as osprey, Eastern massasauga rattlesnake, Karner blue butterfly, purple wartyback mussel, and pugnose minnow.

The plan provides a framework and information that can be used by anyone interested in wildlife conservation, regardless of the size, use, or ownership of the land they manage. It covers known threats to a wide range of natural habitats, such as a conifer forest, as well as those more influenced by humans, such as an agricultural field, and recommends actions to address those threats.

The plan considers a broad range of wildlife (including mussels, snails, crayfish, insects, fish, amphibians, reptiles, birds, and mammals), a broad range of habitats (including rivers, lakes, wetlands, grasslands, and forests), and a broad range of scales (including species-level, habitat-level, Great Lakes basin-level or statewide-level) in order to comprehensively assess the status of wildlife and their habitats in our state.

Fourteen threats to wildlife and their habitats and six other issues of importance to their conservation were identified by participating conservation partners as statewide priorities. For each, the plan provides information about how the threat affects Michigan's wildlife and identifies actions needed to address the threat.

Invasive species and fragmentation were repeatedly identified as the highest priority threats to wildlife and their habitats in both aquatic and terrestrial systems throughout Michigan. Other priority threats include: filling, draining and other changes to wetlands; increased levels of sediments in rivers, streams and lakes from erosion and other sources; suppression of fire in natural communities that are dependant on it and difficulties with using prescribed fire as a management tool; and a lack of understanding of life-history patterns of species of greatest conservation need, and how these species are affected by threats and other ecological processes.

Other issues identified as being important to wildlife in Michigan include: identification and conservation of bird migration routes and stopover sites, migratory obstructions and wintering areas; and addressing urban, municipal, and industrial pollution.

Implementation of actions to address priority needs identified and other recommendations in Michigan's Wildlife Action Plan will help to ensure the conservation, protection, management, use, and enjoyment of the full diversity of our state's wildlife for current and future generations.

For more information, contact Ms. Amy Clark Eagle:
(517) 373-1263, or visit the WAP page on the DNR Web site:
http://www.michigan.gov/wildlifeconservationstrategy.

RAISING AWARENESS
Invasive Species: Our Silent Invader

Part one of a three-part series: **Grassland Invasives**

When you think of today's most threatening issues to our natural resources, urban expansion and habitat destruction are probably some of the first things that come to mind. While these issues are very much a threat and concern, there is a lesser known culprit that is just as destructive: invasive species. Invasive/exotic species are plants and animals that establish themselves in our natural communities and replace native species. Once established, these invasives species thrive in their new environment without any natural means of control. They will often out-compete native species for sun, soil moisture, and nutrients. Many invasives also produce a large number of seeds, causing them to rapidly reproduce.

Invasive species currently cost the U.S. economy $35 billion a year. Some, such as spotted knapweed, were unknowingly introduced while others, like autumn olive, were intentionally introduced. Now these species are thriving and taking over areas and displacing native vegetation. They reduce biological diversity and alter ecological processes. Studies have also shown a reduced number of animals in areas with nonnative species.

In this three-part series, we will try to help you learn about some of the most common invasives found in grasslands, forests, and wetlands. This first part will contain information on some of the most common grassland invasive species found in Michigan: spotted knapweed, autumn olive, and crown vetch.

SPOTTED KNAPWEED

Spotted knapweed is a nonnative perennial that was thought to have been accidentally introduced as a contaminant in alfalfa or hay seed in the late 1800s. It spreads very quickly and releases a toxin in the soil that inhibits the growth of neighboring plants. It is commonly found in disturbed areas such as roadsides and fields as well as in undisturbed areas such as prairies and barrens. Plants will bloom from late July to September and will have numerous thistle-like pinkish/purple flowers. The seed heads, which contain many seeds, will have many black specks on them, hence the name spotted knapweed. Exercise caution if trying to pull by hand. This plant is known to cause skin irritations in some individuals and may contain a carcinogen. Chemical application with a selective herbicide is the recommended technique to remove this invasive.

AUTUMN OLIVE

Autumn olive is a shrub or small tree (6-20' tall) that is native to eastern Asia. It was first introduced in the mid-1800s and has been widely used in landscaping and for wildlife food and cover. Once established it is very hard to control and can eliminate almost all other plant species around it. It is commonly found in disturbed areas, roadsides, open areas, fence rows, etc. The leaves will have a green upper surface and are silvery underneath with white scales. Stems will have rust colored dots and may have thorns. It will produce leaves early in the spring while other species are still dormant. Seeds are often spread via birds after they eat the fruit and fly elsewhere. If burned, mowed, or cut the plants will resprout vigorously unless a specific herbicide is applied to the stumps to inhibit new growth. Herbicide treatment is often the preferred method of control.

CROWN VETCH

Crown vetch is a low growing plant that forms dense mounds and shades out other species. It is native to Europe and Asia. It was once commonly planted along roadsides and waterways as an erosion control method. It can also be found in fields, pastures, and along woodland edges – usually in open, sunny areas. It is a pealike plant with round pinkish lavender and white flowers that bloom from May through August. In areas where infestation is small, hand pulling may be effective, but mowing along with chemical application is most effective.

It's important for Michigan residents to learn about these species and how to identify them so they do not unknowingly introduce them into the wild. These species have ecological, economic, and aesthetic consequences that need to be addressed and understood in order to help control their spread. If they are not kept in check, it could result in drastic changes to our environment as we know it. In part two of this series, we will go over some common species that are invading our forested communities.

TIDBITS

This winter will mark the National Audubon Society's 106th Christmas Bird Count (CBC). The CBC helps researchers and land managers track changes in the abundance and distribution of birds throughout North America and some parts of South America. The CBC runs from December 14 through January 5 each winter and volunteers with all skill levels participate in groups, or "field parties," to cover designated survey areas.

Areas to be surveyed in Michigan range from the southernmost points in the state up to the tip of the Keweenaw Peninsula. A map of the count areas can be found on the Michigan Audubon Society's web site: http://www.michiganaudubon.org/cbc.html.

If you're interested in finding out more about the CBC or volunteering to participate, contact the Michigan State CBC Coordinator, Russ Schipper, (269)375-7210 or russschip@aol.com.

If you are not currently receiving copies of The Spotting Scope, please send a card with your name and address to:

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Printed by Authority of PA 451 of 1994.

Total Number of Copies Printed.....4,000
Cost Per Copy.....$0.118
Total Cost.....$ 474.76

This publication is available in alternative formats upon request.

IC 2703 (11/8/2005)

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